

Amendments to the Claims:

This listing of claims replaces all prior listings, and versions, of claims in the present application.

Listing of Claims:

1-7. (Canceled)

8. (New) An apparatus comprising a processor for processing digital signals to produce a modulating signal for radio transmitter circuitry, the processor being configured to implement a protocol stack having a physical layer and a medium access control layer, above the physical layer, wherein the medium access control layer provides a plurality of transport channels which are combined and then interleaved to produce said modulating signal, each transport channel being configured to process a signal according to one of a plurality of process schemes, the configuration of which is established during a call setup.

9. (New) An apparatus according to claim 8, wherein said interleaving is performed on blocks of data constituting a plurality of bursts.

10. (New) An apparatus according to claim 8, wherein the processor performs interleaving of said transport channels immediately before they are combined.

11. (New) An apparatus according to claim 8, wherein the plurality of process schemes includes at least one of a cyclic redundancy check, channel coding and rate matching.

12. (New) An apparatus according to claim 8, wherein a multiplexer is arranged to multiplex interleaved data output by the transport channel immediately prior to transmitting data to a physical layer.

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13. (New) An apparatus according to claim 12, wherein the physical layer comprises an interleaver for further interleaving of the signal output from the medium access control layer, immediately subsequent to combination of the transport channel.